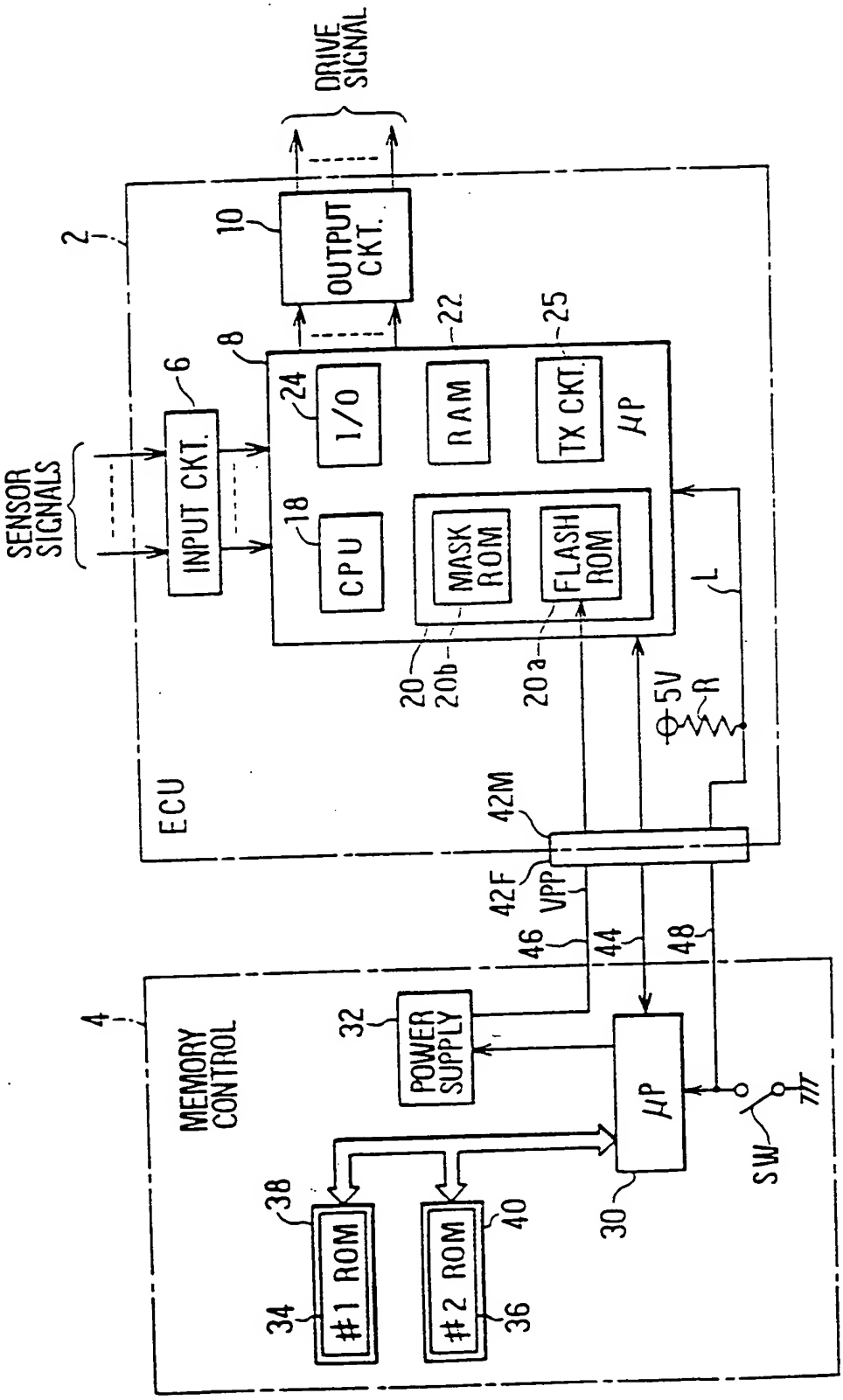
O I P E
JC22
FEB 14 2003
PATENT & TRADEMARK OFFICE

FIG. 1



O I P E
FEB 14 2003
JC22
PATENT & TRADEMARK OFFICE

FIG. 2

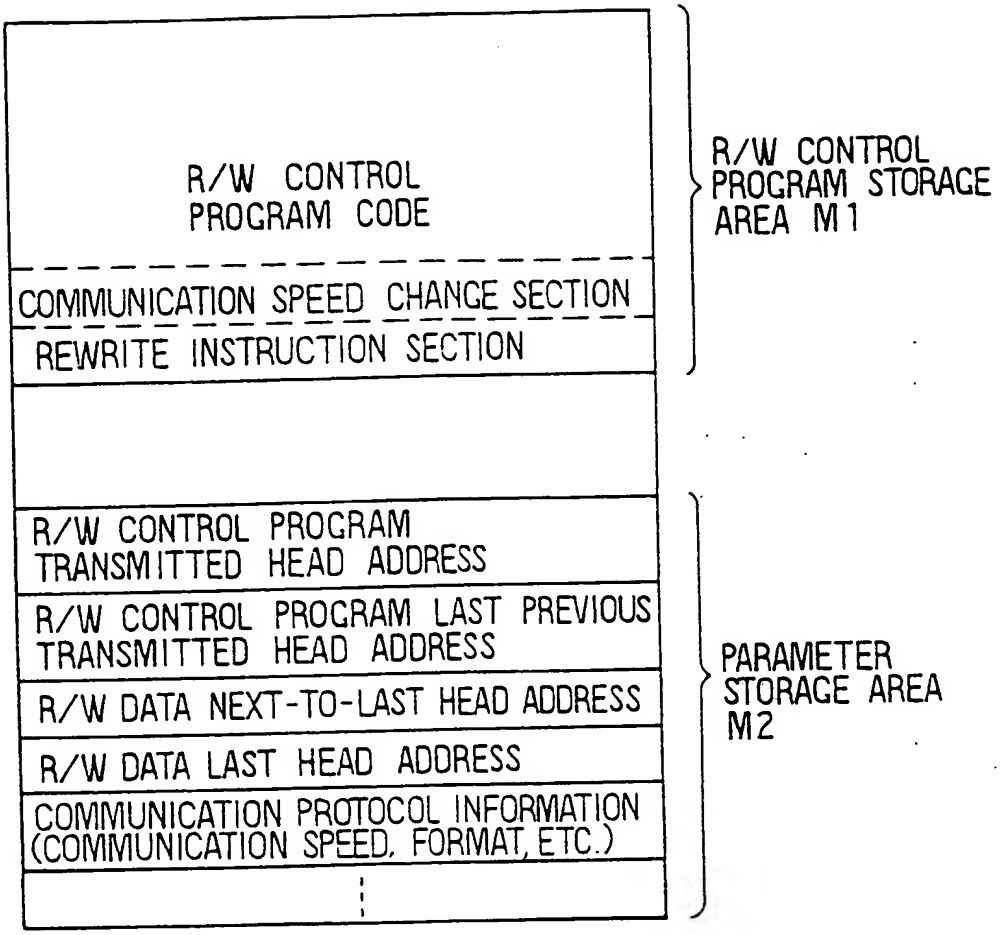
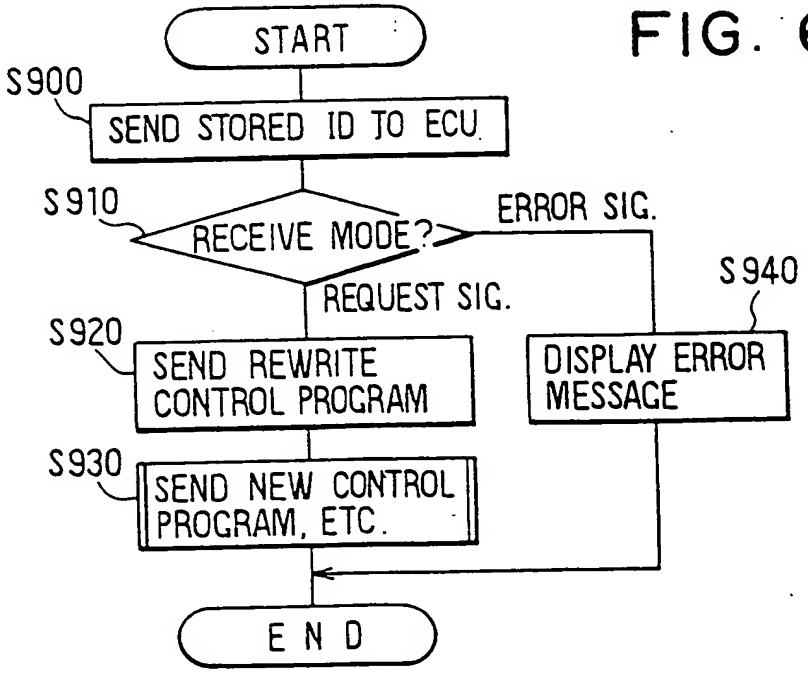
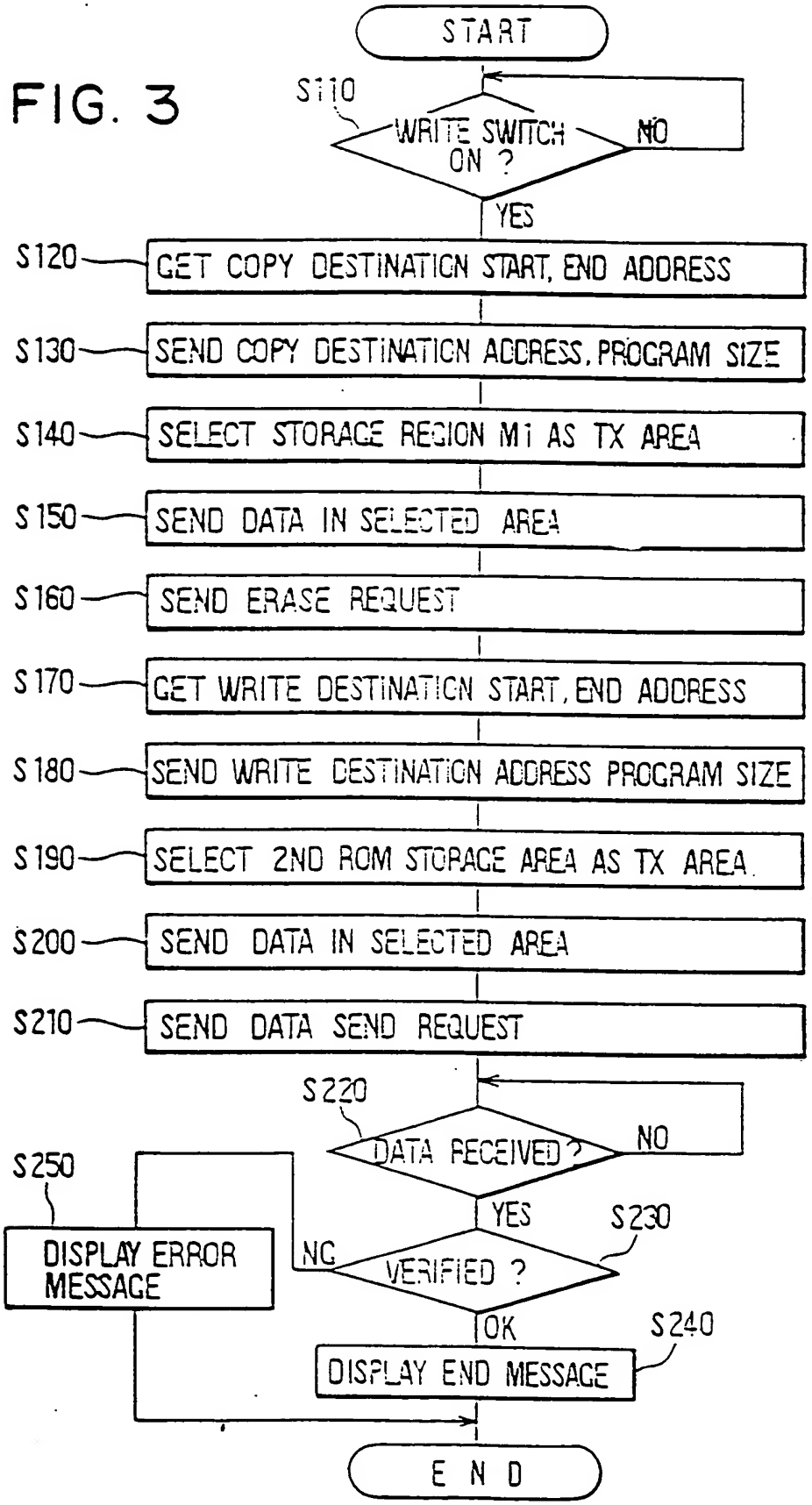


FIG. 6



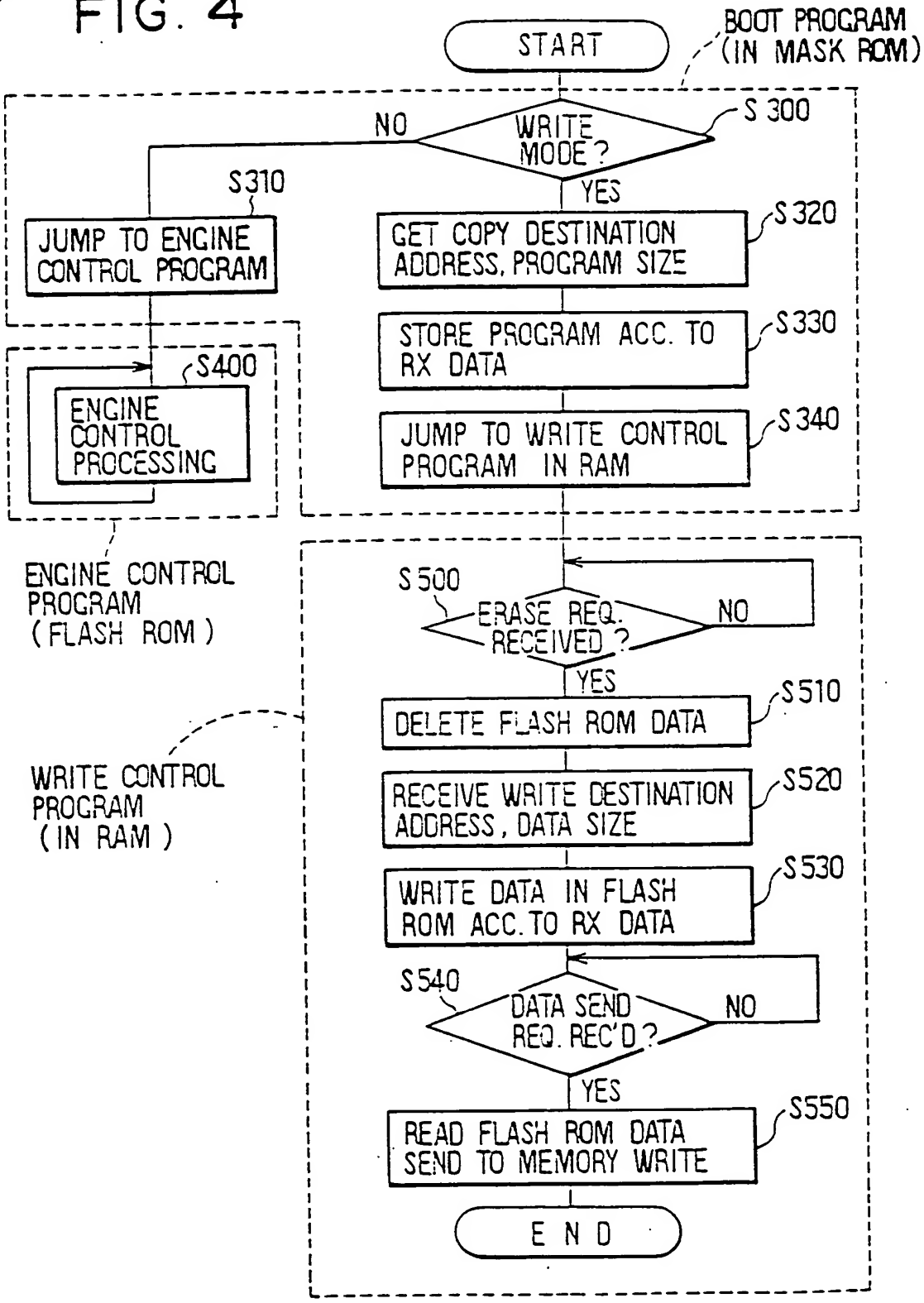
OIPE JC22
FEB 14 2003
PATENT & TRADEMARK OFFICE

FIG. 3



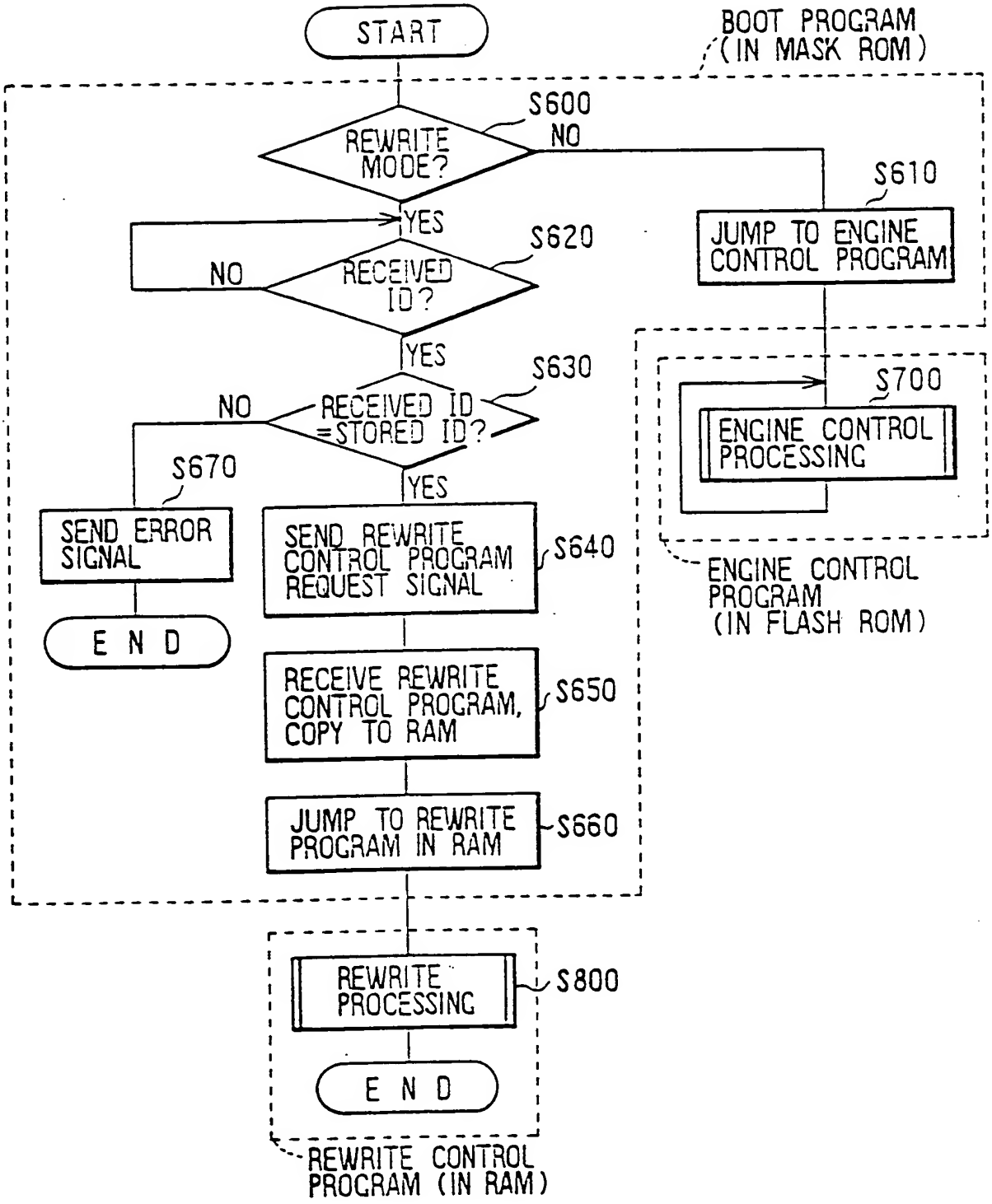
OIPE JC22
FEB 14 2003
PATENT & TRADEMARK OFFICE

FIG. 4



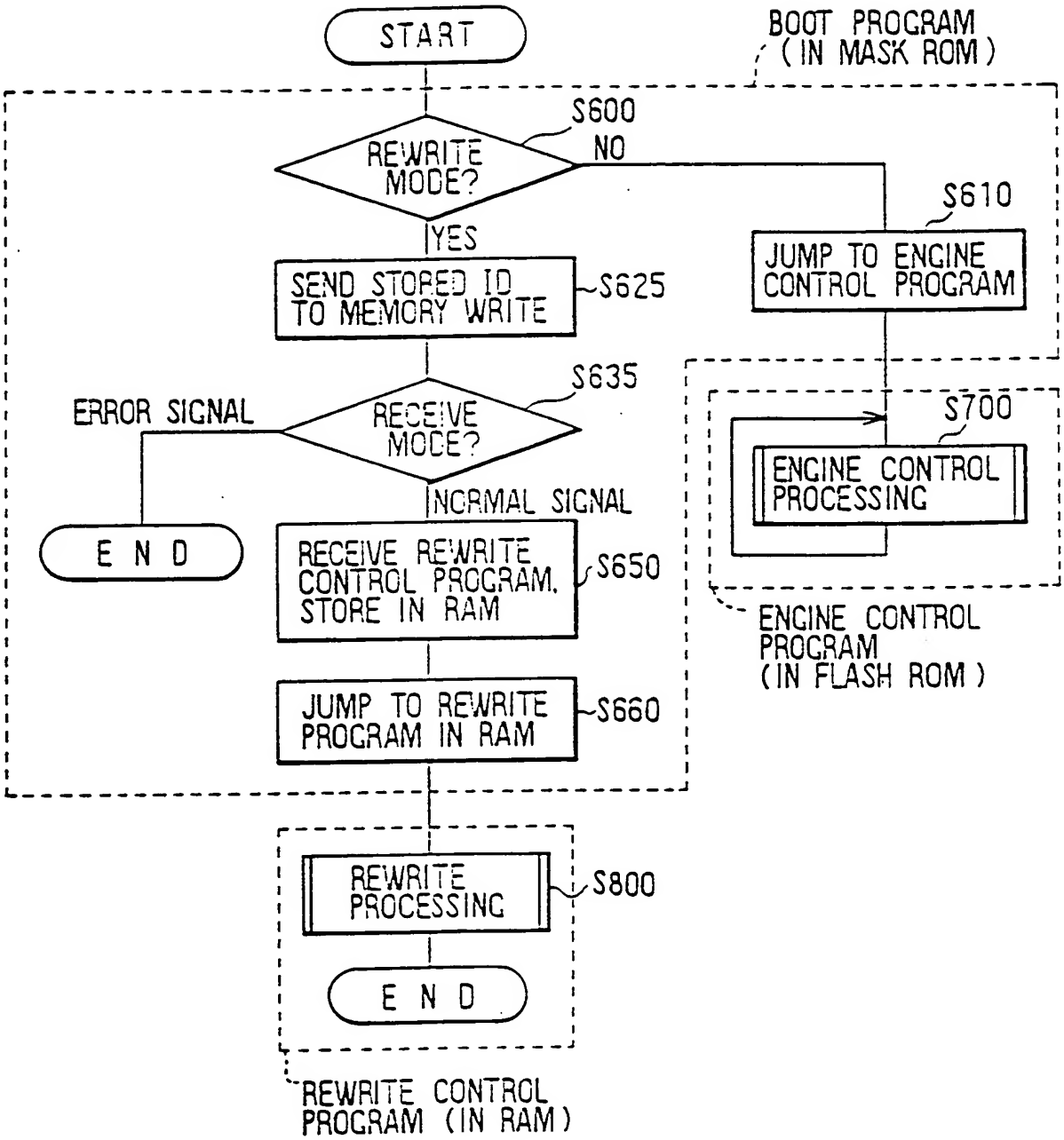
OIPE IC22
FEB 14
PATENT & TRADEMARK OFFICE

FIG. 5



Q·I·P·E JC22 FEB 14 2003 PATENT & TRADEMARK OFFICE

FIG. 7



O I P E
FEB 1 4 2003
JC22
PATENT & TRADEMARK OFFICE

FIG. 8

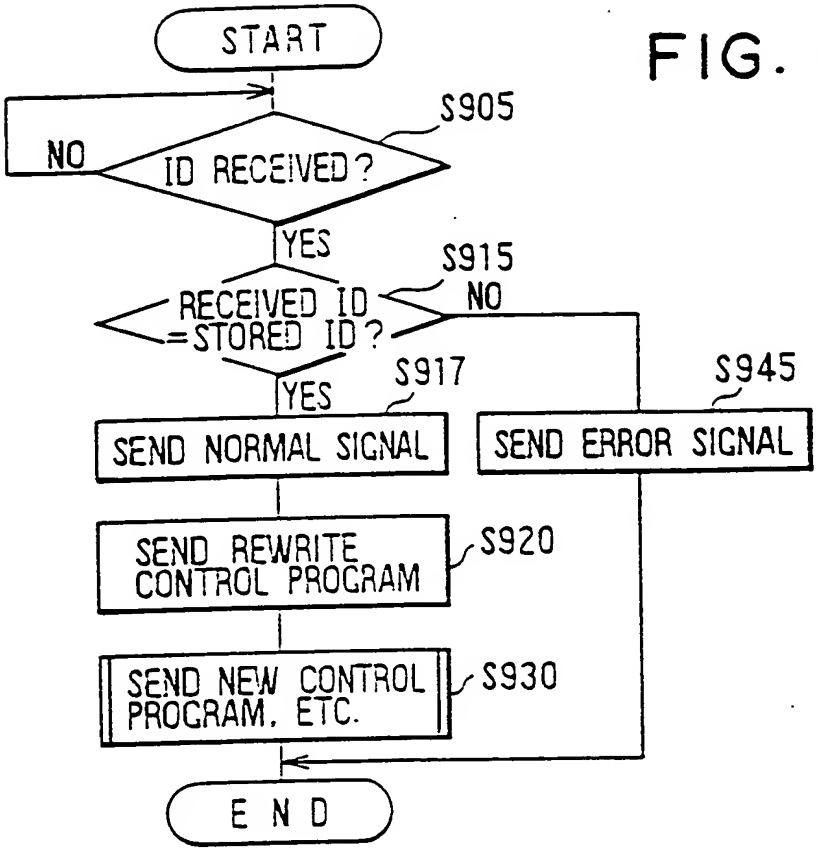
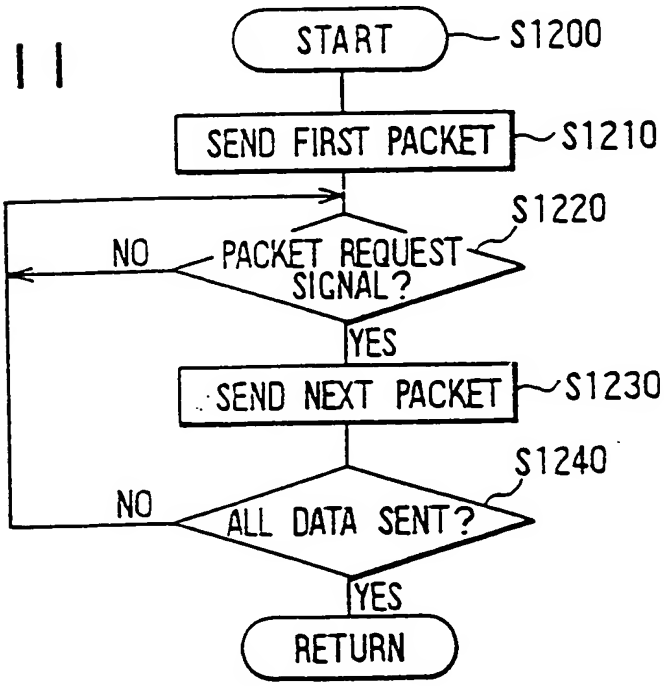
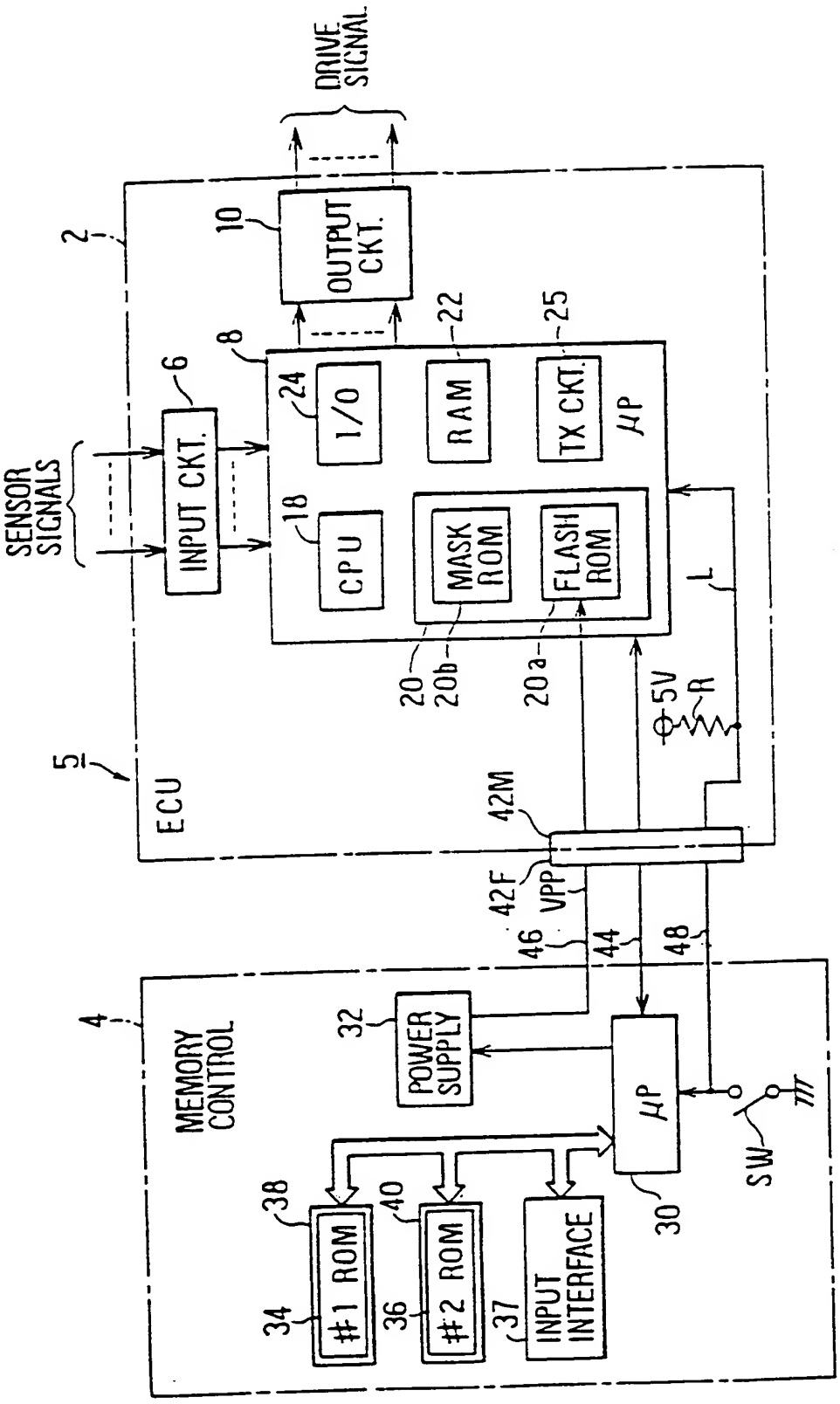


FIG. 11



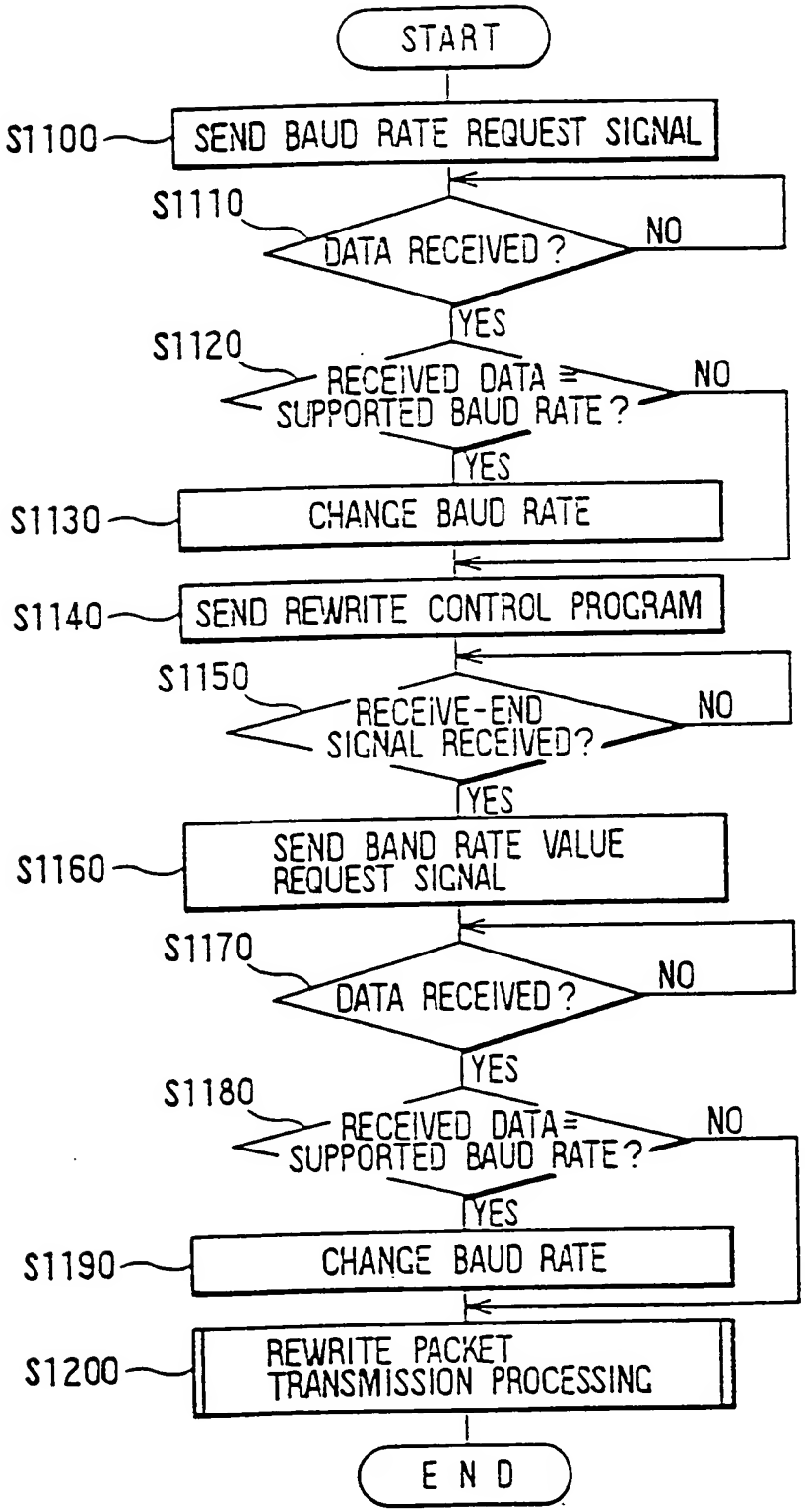
OIPE
FEB 14 2003
PATENT & TRADEMARK OFFICE
JC22

FIG. 9



OIPE JC22
FEB 14 2003
PATENT & TRADEMARK OFFICE

FIG. 10



OIPE JC22
FEB 14 2003
PATENT & TRADEMARK OFFICE

FIG. 12

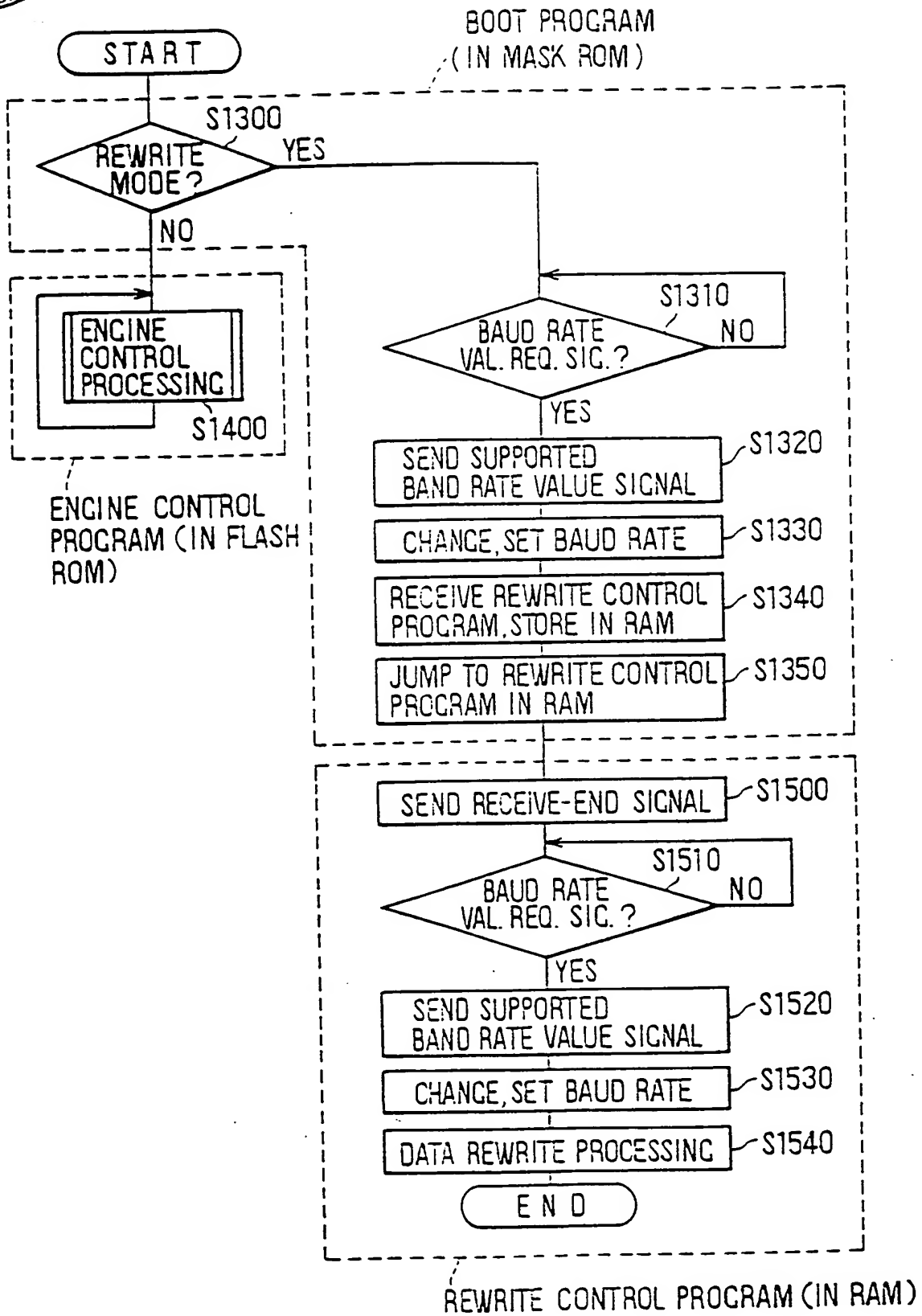
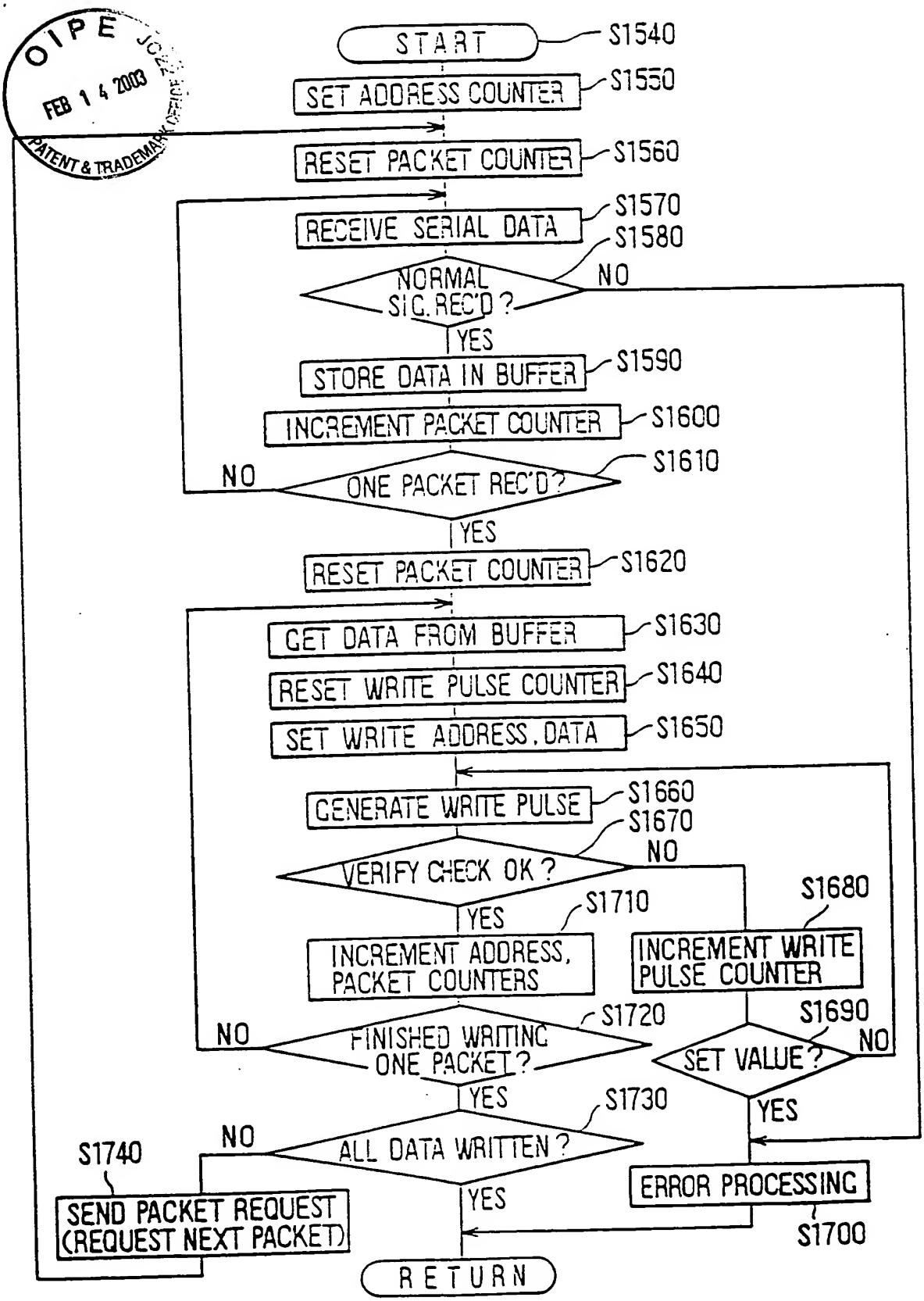


FIG. 13


START
S1540
SET ADDRESS COUNTER
S1550
RESET PACKET COUNTER
S1560
RECEIVE SERIAL DATA
S1570
NORMAL SIG. REC'D ?
S1580
NO
YES
STORE DATA IN BUFFER
S1590
INCREMENT PACKET COUNTER
S1600
NO
ONE PACKET REC'D ?
S1610
YES
RESET PACKET COUNTER
S1620
GET DATA FROM BUFFER
S1630
RESET WRITE PULSE COUNTER
S1640
SET WRITE ADDRESS, DATA
S1650
GENERATE WRITE PULSE
S1660
S1670
VERIFY CHECK OK ?
NO
YES
S1710
INCREMENT ADDRESS, PACKET COUNTERS
S1680
INCREMENT WRITE PULSE COUNTER
S1720
NO
FINISHED WRITING ONE PACKET ?
S1690
SET VALUE ?
NO
YES
YES
S1730
NO
ALL DATA WRITTEN ?
S1740
SEND PACKET REQUEST (REQUEST NEXT PACKET)
YES
ERROR PROCESSING
S1700
RETURN

OIPE JC22
FEB 14 2003
PATENT & TRADEMARK OFFICE

FIG. 14

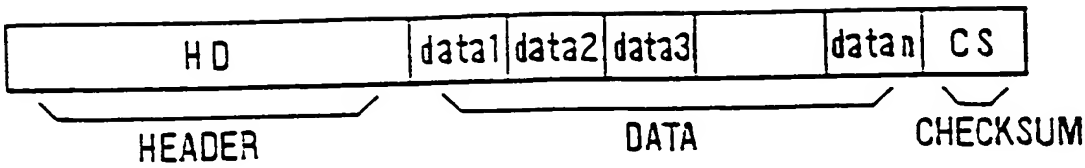


FIG. 15A

MEMORY REWRITE DEVICE

FIG. 15B

ECU SIDE DATA WRITING PERIOD

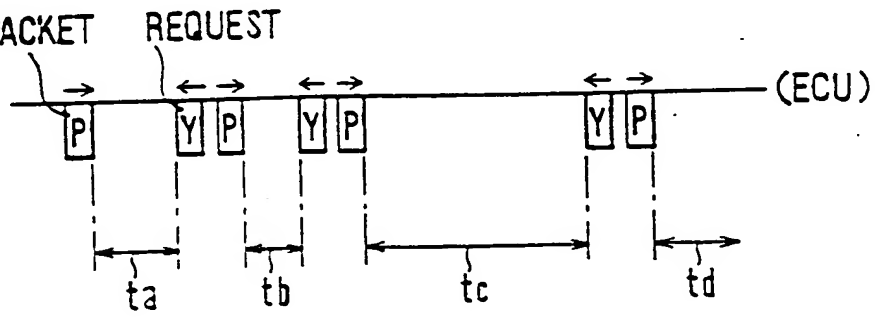
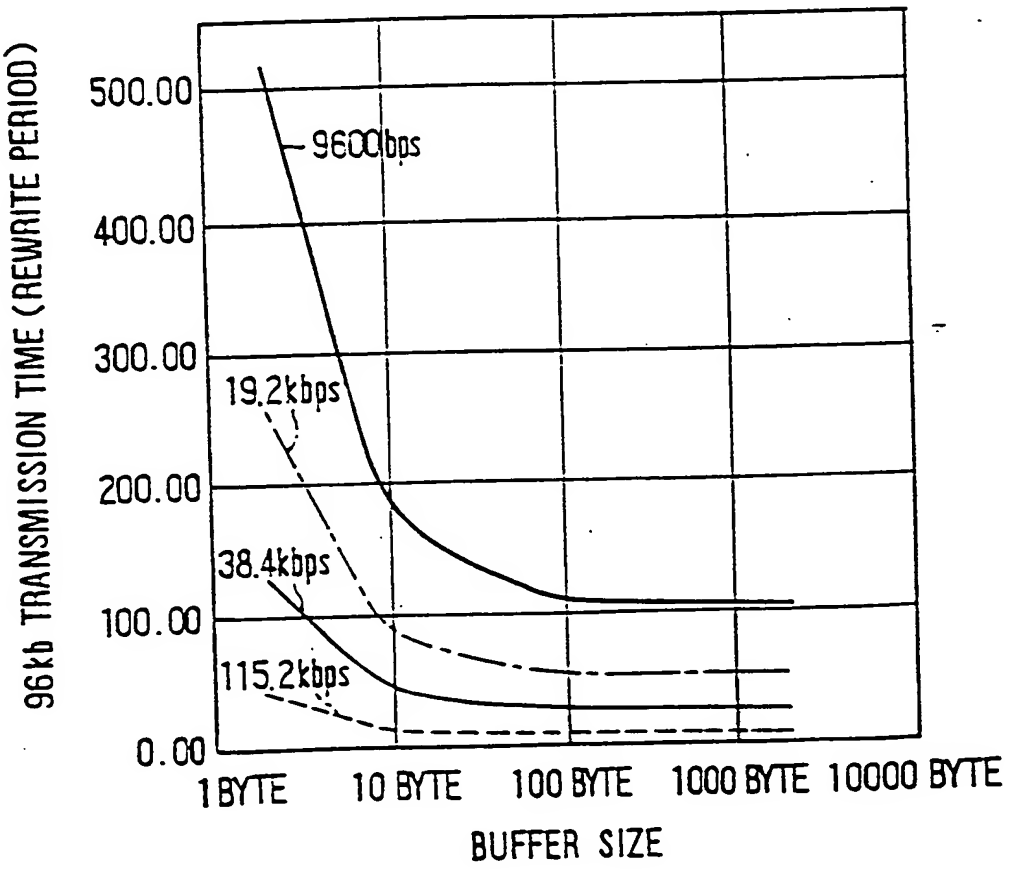



FIG. 16